WHAT IS CLAIMED IS:

1. A measuring device for determining the radiant heat flux received by a test specimen having a coating to improve the absorption of the radiant heat flux comprising:

a body;

a coating on said body, the coating on said body being the same as the coating on the test specimen;

an electrical heating element in heat transfer relationship with said body, free from interposition, between the heating element and said body, of the coating on said body; and

a thermal detector indicating the temperature of the body.

2. The measuring device of claim 1, wherein said body has a shape similar to that of a test specimen.

3. The measuring device of claim 2, wherein said body is made of copper.

4. The measuring device of claim 2, wherein said body is a metal disk.

5. The measuring device of claim 1, wherein the electrical heating element is positioned within said body.

6. The measuring device of claim 1, wherein the electrical heating element is an electric resistance heating element.

7. The measuring device of claim 1, wherein the thermal detector is a thermocouple connected to said body.

8. The measuring device of claim 1, further comprising an insulated holder for said body, wherein said body has a first surface to which the coating is applied and at least one other surface, said first surface being exposed for receiving radiant heat flux, and said other surface being covered by the insulated holder.

9. The measuring device of claim 1, further comprising means for indicating the electrical power applied to the electric-resistance heating element.

10. A measuring device for determining the radiant heat flux received by a test specimen having a coating to improve the absorption of the radiant heat flux comprising:

a body;

a coating on said body, the coating on said body being the same as the coating on the test specimen;

an electrical heating means in heat transfer relationship with said body, free from interposition, between the heating means and said body, of the coating on said body; and

means for indicating the temperature of the body.

11. A method for measuring the response of a material or device to fire comprising:

coating a specimen of the material or device to simulate the heat absorption characteristics of the material or device in a fire;

providing a measuring device for measuring heat flux absorbed in a fire;

coating the measuring device with the same coating as the specimen;

applying radiant heating to the measuring device through the coating at a predetermined angle of incidence to heat the measuring device to a steady-state temperature;

measuring the power required to heat the measuring device to the steady-state temperature by the radiant heating;

reducing the radiant heating to zero and substituting sufficient electrical resistance heating of the measuring device to heat the measuring device to the steady-state temperature;

measuring the electrical power required to heat the measuring device to the steady-state temperature by the electrical resistance heating;

applying radiant heating to the specimen through its coating at said predetermined angle of incidence to heat the specimen to a predetermined condition in response to the heating;

measuring the power required to heat the specimen to the predetermined condition by the radiant heating in order to obtain a measurement; and

applying to said measurement the ratio of a) the electrical power required to heat the measuring device to the steady-state temperature by the electrical resistance heating to (b) the electrical power required to heat the measuring device to the steady-state temperature by the radiant heating, in order to adjust the measuring of the power required to heat the specimen to take into account the effect of the coating and the angle of incidence on the radiant heating of the specimen.

12. A method for measuring the response of a material or device to fire comprising:

a) coating a specimen of the material or device to simulate the heat absorption characteristics of the material or device in a fire;

b) providing a measuring device for measuring heat flux absorbed in a fire;

c) coating the measuring device with the same coating as the specimen;

d) applying a first level of radiant heating produced by a first constant power input to the measuring device through the coating at a known angle of incidence to heat the measuring device through a plurality of selected temperature increases;

e) measuring the times required to heat the measuring device through the selected temperature increases by the radiant heating;

f) repeating steps d) and e) for other levels of radiant heating in order to obtain a first set of data based on measurements at all of the levels of radiant heating;

g) reducing the radiant heating to zero and substituting a first level of electrical resistance heating of the measuring device produced by a first constant power input to heat the measuring device through said plurality of temperature increases;

h) measuring the times required to heat the measuring device through the selected temperature increases by the electrical resistance heating;

i) repeating steps g) and h) for other levels of electrical heating in order to obtain a second set of data based on measurements at all of the levels of electrical heating;

j) plotting the temperature versus time for both sets of data in order to generate lines from plotted points;

k) determining, by interpolation, of the lines at common temperatures, the level of electrical heating that most closely matches each level of radiant heating in order to obtain a first interpolation set;

l) determining, by interpolation of the lines at common times, the level of electrical heating that most closely matches each level of radiant heating in order to obtain a second interpolation set; and

m) averaging both interpolation sets to find the electrical power that most closely matches each level of radiant heating and thereby determine the absorbed heat flux for each level of radiant heating.